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A NEW RUDBECKIA FROM INDIANA.

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IN an interesting collection of Indiana plants recently sent to the Gray Herbarium by Mr. Charles C. Deam were several specimens of a Cone-flower of the *Rudbeckia speciosa* group which Mr. Deam suspected might prove to be new. The plant, although rather closely allied to *R. speciosa* Wenderoth and its var. *Sullivantii* (Boynton & Beadle) Robinson — the latter of which was collected by Mr. Deam in the same general region — proves in fact to be undescribed, and may be called, in recognition of the careful and extensive collecting done by its discoverer in various parts of the United States and in Central America,

RUDBECKIA Deamii, sp. nov. Perennis stolonifera stolonibus brevibus apice foliatis. Caulis simplex subtenuis erectus ad 6 dm. altus striatus dense hirsutus pilis albidis retrorsis ad apicem caulis adscendentibus. Folia stolonum ovata vel ovali-ovata acuta basi subabrupte contracta deinde acute cuneata tenuia membranacea triplinervia vel subquintuplinervia supra subdense sed vix aspere hirsuto-pilosa pilis adscendentibus vel subappressis basi vix dilatatis subtus paullulo pallidiora similiter pubescentia crenato-serrata dentibus ca. 6-jugis depressis mucronulatis 7-10(-13.5) cm. longa 3.5-5.2(-6) cm. lata, in petiolis retrorse hirsutis vix marginatis 5-9 cm. longis; folia caulina 10-11 (supremis 1-2 bracteiformibus lanceolatis integris 2-4 cm. longis exclusis), 2-3 infima eis stolonum similia; media et superiora ovata acuminata basi cuneata sessilia subamplectentia 7.5-15.5 cm. longa 2.8-5 cm. lata. Capitula 1-2(-4) caulem et ramum axillarem terminantia 4.5-6 cm. lata; pedunculi sulcati hispido-pilosi pilis adscendentibus vel subappressis 9.5-13.5 cm. longi; discus late conicus obtusus 1.1 cm. altus 1.3 cm. crassus. Involucrum

2(-3)-seriati reflexi 1.2-1.5 cm. longi phyllaria extima herbacea inaequalia lanceolata acuta mucronulata ciliata et utroque hispidopilosa 2.5-4 mm. lata; interiora 1(-2)-seriata anguste lanceolata acuminata basi paullum indurata et pallida ceterum herbacea ciliata et extus breviter hispidopilosa intus glabra vel subglabra extimis duplo breviora. Radii 12-14 lineari-cuneati valde bidentati supra aurantiaco-flavi (colore basi vix saturatiore) subtus dorso appressopilosuli (1.6-)2.2-2.5 cm. longi (4-)5-6 mm. lati; corollae disci fuscopurpureae glabrae 4 mm. longae (tubo indistincto 0.7 mm., dentibus lanceolato-triangularibus 0.8 mm.). Paleae acutae ad apicem subscariosae et erosulae glabrae vel in carina sparsissime pilosae 5 mm. longae. Achaenia nigra glabra quadrangularia 2.5 mm. longa (pappo coroniforme brevissimo paullum eroso in angulis achaenii non producto incluso). Antherae basi valde sagittatae. Styli rami apice subtruncati hispidi.

Stem simple, slender, erect, about 6 dm. high, densely retrorse-hirsute, appressed-hairy above, with short leafy off-shoots. Leaves of the stolons ovate or oval-ovate, acute, at base rather abruptly contracted, then cuneately narrowed into the petiole, thin, triplior quintuplinerved, crenate-serrate (teeth about 6 pairs, depressed, mucronulate), hirsute-pilose both sides with ascending or subappressed hairs, slightly paler beneath, 7-10 cm. long, 3.5-5.2 cm. wide; stem-leaves 10-11 (with 1-2 additional lanceolate entire bracts 2-4 cm. long above), the 2-3 lowest similar to those of the stolons, the others ovate, acuminate, cuneate to base, subamplexicaul, 7.5-15.5 cm. long, 2.8-5 cm. wide. Heads 1-2(-4), terminating the stem and an axillary branch, 4.5-6 cm. wide; peduncles sulcate, hispid-pilose with ascending or subappressed hairs, 9.5-13.5 cm. long; disk broadly conic, obtuse, 1.1 cm. high, 1.3 cm. thick. Involucre 2(-3)-seriate, reflexed, 1.2-1.5 cm. high, the outermost phyllaries unequal, herbaceous, lanceolate, mucronulate, acute, ciliate, hispid-pilose both sides, 2.5-4 mm. wide; the inner 1(-2)-seriate, narrowly lanceolate, acuminate, at base slightly indurated and pale, otherwise herbaceous, ciliate, on the outer face shortly hispid-pilose, on the inner glabrous or subglabrous, half as long as the outer phyllaries. Rays 12-14, linear-cuneate, strongly bidentate, orange-yellow scarcely deeper at base, on back appressed-pilosulous, 2.5 cm. long, 5-6 mm. wide; corollas of disk deep purple, glabrous, 4 mm. long (the indistinct tube 0.7 mm., the lance-triangular teeth 0.8 mm. long). Pales acute, at apex subscarios and finely erose, more or less colorate, glabrous or with a few hairs along the keel, 5 mm. long. Achenes black, glabrous, quadrangular, 2.5 mm. long (including the very short coroniform slightly erose pappus, which is not produced over the angles). Anthers strongly sagittate. Style-branches subtruncate, hispid at apex.

INDIANA: a single colony in dry, black, friable soil along Wild Cat Creek, Carroll Co., 2 Sept., 1916, *Charles C. Deam* 21,674 (TYPE in Gray Herb.).

Most nearly related to *R. speciosa* Wenderoth, from which it differs in its dense retrorse pubescence, its much broader and thinner stem-leaves (practically uniform in size and shape with these of the stolons, instead of much narrower and longer as in *R. speciosa*), and its outer phyllaries which are rather densely pubescent on the inner as well as outer face. Also close to *R. speciosa* var. *Sullivantii* (Boynton & Beadle) Robinson, which however has a sparse harsh pubescence if any on the stem, thick leaves, thick blunt phyllaries scarcely pubescent on the upper side, and always apically ciliate pales.

GRAY HERBARIUM.

COLOR FORMS OF IMPATIENS BIFLORA.

C. A. WEATHERBY.

THE common jewel-weed produces an unusually interesting series of color variations. In their range of hues they are very similar to those of the garden "nasturtium" (*Tropaeolum majus* L.) and, were it worth while, could doubtless be made to develop, under cultivation, as many shades and gradations of color. Indeed, Professor Fernald tells me of one locality where, possibly through the juxtaposition and crossing of several forms, something of the sort has already happened in the wild. The forms known to the writer and described below appear, however, to represent the main lines of variation. The flowers, in the dried specimens cited, have in most cases lost all their color, but the collectors' notes give the needed information.

IMPATIENS BIFLORA Walt. Perianth orange, with more or less numerous, usually crimson spots. The typical and common form.

Forma **citrina**, f. nov. Perianthiis flavis modo *Citri Limonum* fructus, coccineo-maculatis. Perianth lemon-yellow, with crimson spots. CONNECTICUT: Moist thicket, Thompson, Sept. 7, 1908, *Bissell & Weatherby* (TYPE, in Gray Herb.).

Forma **albiflora** (Rand & Redfield), comb. nov. *I. fulva*, f. *albiflora* Rand & Redfield, Fl. Mt. Desert 88 (1894). "Flowers white or cream-color," the spots often paler than in the typical form, then pink or brownish red. MAINE: Southwest Harbor, *Rand*; Farmington, Aug. 15, 1894, *Fernald*, "white with pink spots." MASSACHUSETTS: